MYRMECIA

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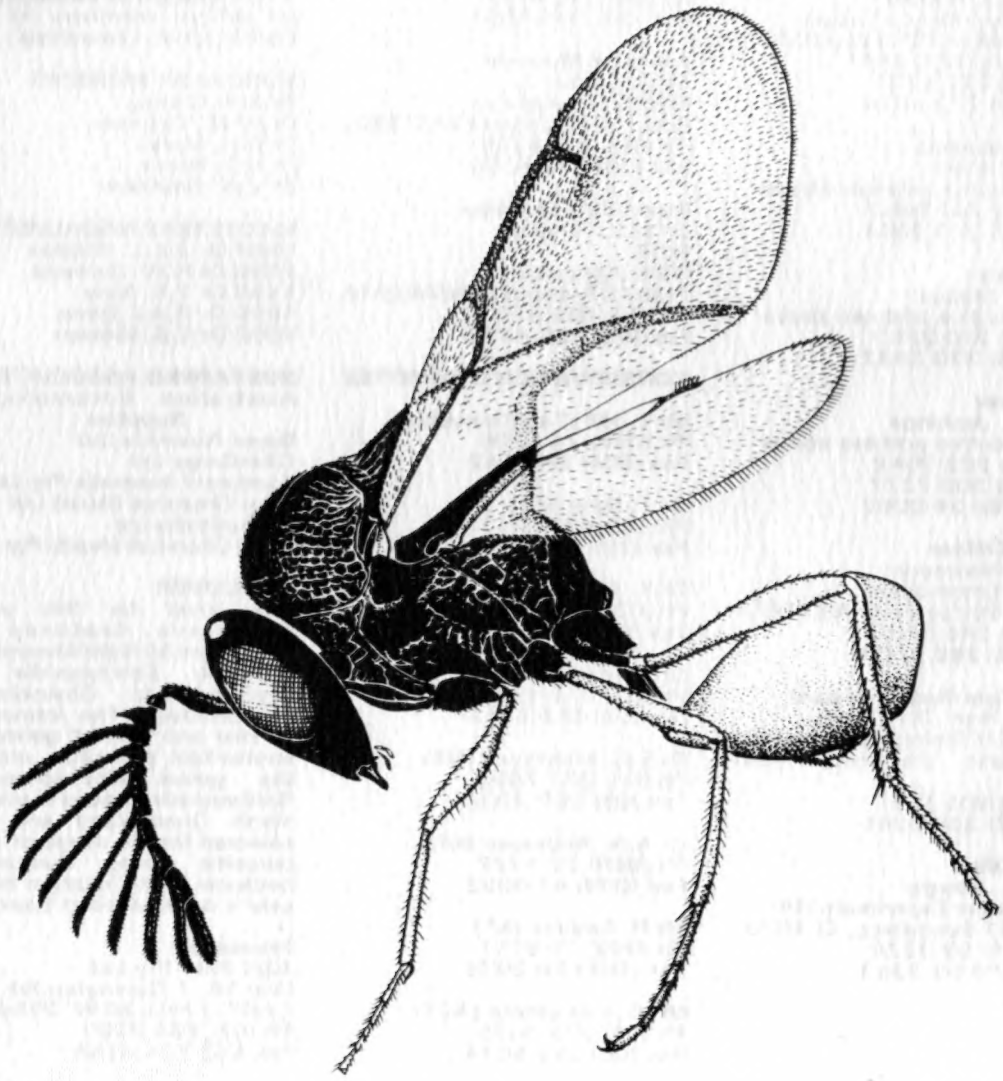

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MACKERRAS MEDALLISTS
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1986 Dr R.W. Sutherst
1988 Dr T.R. New
1990 Dr R.A.I. Drew
1992 Dr E.S. Nielsen

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THE COVER
The cover for this year's *Myrmecia* features an illustration by Sybil Monteith of a male *Schizaspidia* sp. (Hymenoptera: Chalcidoidea: Eucharitidae). The immatures of this and related genera of eucharitids parasitize ants of the genus *Odontomachus*. *Schizaspidia* is found in tropical North Queensland and was selected from a range of other parasitic wasp illustrations because of the location of this year's conference in Cairns.

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MYRMECIA

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ADVERTISING RATES FOR MYRMECIA

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Quarter Page	$24	$72

These rates apply to camera-ready copy supplied by the advertiser. Where this is not supplied, an additional charge may be made for the layout.

In addition, loose inserts and pamphlets supplied by the advertiser will be included in a mailout for $100 per item. The items should be of a size which will not project beyond the pages of *Myrmecia*.

NOTICE

Statements made in *Myrmecia* do not necessarily represent the views of the Australian Entomological Society. Items printed herein should not be reproduced without permission of the author of the material.

COPY DEADLINE FOR NEXT ISSUE

Material for publication in the February 1994 issue of *Myrmecia* should be in the hands of the Editor at the address below by **Friday 21 January 1994**. Submission on IBM-compatible floppy disk in a major word processing format is preferred. Details are available from the Editor.

Murray FLETCHER
News Bulletin Editor
Biological and Chemical Research Institute
PMB 10, Rydalmere, NSW 2116

NOTE FROM THE EDITOR

This is the first issue of *Myrmecia* printed in Sydney. The move from Brisbane to Sydney has therefore taken nearly two years, although there was no real pressure on me to change printers. Dean Brown of All Clear Offset Printers (ACOP) in Brisbane has given sterling service to this publication for many years and I publicly thank Dean for his contribution to the Society. ACOP will continue to contribute to Entomology through the many other entomological publications which will continue to pass through their presses.

I am hopeful that A & K Print Pty Ltd in Castle Hill will be able to maintain the standard that ACOP were able to achieve. It will certainly be easier for me to deal with a printer in person rather than by remote control. The cost of freight and courier services will also be avoided.

This issue also incorporates an innovation suggested by **Rob Emery** (WA Dept. of Agriculture). This is to highlight Entomologists' names in the Regional News by picking them out in bold face, making them easier to find for readers. Any other suggestions for improvements are welcome.

Murray FLETCHER
News Bulletin Editor

EXECUTIVE REPORT

Meetings

The Core Executive met on 26 August, 16 September and 14 October 1993.

New Members

We welcome the following new members to 1993 membership:

Elected 26 August 1993

Ms D.C. GLENN, BSc(Hons), 60 Alexander Ave, Upwey VIC 3158. Dean is a PhD student at La Trobe University and has an interest in the Trichogrammatidae.

Ms I. KOVACS, BSc(Hons), Dept of Genetics and Human Variation, La Trobe University, Bundoora VIC 3083. Ingrid is a PhD Student with a project on migration in *H. punctigera*. She is investigating population differentiation at a quantitative and molecular level in that insect.

Mr J.A. WALKER, MSc, 14 Merriwa St, Gordon NSW 2072. James has an interest in insect taxonomy and collecting, especially the Coleoptera, Blattodea and Diptera.

Ms B.M. WATERHOUSE, BA(Hons), c/o DPI, PO Box 1054, Mareeba QLD 4880. Barbara is a Quarantine Botanist involved in routine survey work of insects and weeds of quarantine significance in Torres Strait/PNG (part of a Northern Australia Quarantine Strategy). Her interest is in hosts/alternative hosts for insect pests.

Elected 16 September 1993

Miss J. BURCHER, BSc, 7 Burcher St, Pullenvale QLD 4069. Jenny is a Technical Assistant, CSIRO Division of Entomology, Long Pocket Labs, and has interests in the biological control of weeds and in pollination biology.

Dr A.R. TOMKINS, PhD, Ruakura Research Centre, Private Bag 3123, Hamilton NEW ZEALAND. Dr Tomkins is a Senior Scientific Officer with 14 years of experience in integrated pest management in fruit trees.

Elected 14 October 1993

Ms J. BEAN, BApplSc, 221 Mackenzie St, Toowoomba QLD 4350. Jaycinth is a Scientific Assistant with the Division of Plant Protection (Entomology), QDPI.

Mr A. KENNETT, BAppSc, PO Box 4520, Kingston ACT 2604. Andrew is a Senior Professional Officer with the National Registration Authority for Agricultural Chemicals and is enrolled as a Masters student at the University of Western Sydney. He has interests in IPM programs.

Dr D. STEVEN, PhD, Takapuna NEW ZEALAND. Dr Steven is a Science Manager with the Horticulture and Food Research Institute of New Zealand Ltd and has interests in the IPM of fruit crops, host-plant relationships and insect dispersal.

Mr E.E. TAYLOR, 5 Endeavour Ave, La Perouse NSW 2036. Edward is a consultant teacher in pest control.

Resignation from Membership

(Received with regret)

Dr T.G. Amos

Dr R. Peakall

Change of Address or Title

Mr J.W.O. BALLARD, Dept of Ecology and Evolution, University of Chicago, 1101 E57th St, Chicago IL 60637, USA

Dr G.R. BROWN, Curator of Entomology, Northern Territory Museum of Arts and Science, GPO Box 4646, Darwin NT 0801

Dr D.E. EVANS, c/o RIRDC, PO Box 4776, Kingston ACT 2604

Dr G.G. FOSTER, 7 Hirschfeld Place, MacGregor ACT 2615

Mr G. FROWD, 125 Dalhunty St, Tumut NSW 2720

Ms K.L. HERGSTROM, DPIF, GPO Box 990, Darwin NT 0801

Ms G. MAYNARD, 8 Marsden St, Dickson ACT 2602

Mr A.D. MOORE, 17 Eloise Avenue, Springwood QLD 4127

Ms C.J. NEALE, Division of Plant Protection, DPI, Meiers Rd, Indooroopilly QLD 4068

Dr D.K. YEATES, CSIRO Division of Entomology, PO Box 1700, Canberra ACT 2601

From the Minutes

Vale

The Executive recorded with regret the passing of Mr J. Sedlacek.

It is expected that copies of the Society's amended Constitution and By-Laws will be

available for distribution early next year.

Arrangements are proceeding for the Society to produce a new directory of entomology to include south-west Pacific countries. The new directory will include names, means of contact and categories of members' interests.

Investigations are continuing on the preparation of a new edition of *Bibliography of Australian Entomology*.

Proposals have been accepted for future Annual General Meetings and Scientific Conferences of the Society to be put to the Standing Committee of Agriculture Research and Development for recognition.

Paul MADGE
Hon. Secretary

NAME OF THE SOCIETY'S JOURNAL

The Executive is considering changing the name of the Society's Journal when the format changes next year in line with proposals agreed to at the last AGM.

As the Journal is the flagship of the Society, every effort should be made to attract papers of the highest standard. Members have suggested that the current title is too long and too exclusive (infering that only members of the Society can contribute) and that a broad title may encourage a wider range of authors.

On the other hand, a name change would break with continuity and tradition and cause headaches for libraries and abstracting services.

The Executive's prefered name is ***Journal of Australian Entomology***. The Executive appreciates the importance of the Journal to the Society and wishes to explore members' attitudes to a change before progressing further with the idea.

Any comments should be addressed to the Secretary, c/- the Society Executive Address given on the inside front cover of *Myrmecia*.

SOCIETY ANNOUNCEMENTS

IAN MACKERRAS MEDAL 1994

Nominations for the 1994 Ian Mackerras Medal are called for in this issue of *Myrmecia* (see advertisement on page 30).

Dr Ian Mackerras was a leading member of the entomological profession in Australia for many years until his death in 1980. After graduating in medicine and science from the University of Sydney in 1924 he began a distinguished career in the fields of entomology and parasitology.

He served in both World Wars and during the 1939-45 conflict he made a very significant contribution to the protection of servicemen in the Pacific theatre from the ravages of arthropod-borne diseases.

In 1928 he joined CSIR in Canberra and was charged with establishing a research program in veterinary entomology. This led to work on sheep blowfly, buffalo fly, the cattle tick, and ephemeral fever in cattle. After peace was declared in 1945, Dr Mackerras returned to CSIR but moved to work at the Yeerongpilly laboratory. In 1947 he became the first Director of the Queensland Institute of Medical Research and established that fledgling organisation as a major research centre. After retiring in 1961 he rejoined CSIRO as a Senior Research Fellow in Canberra with the task of editing "The Insects of Australia".

In 1964 Dr Mackerras played a major role in the formation of the Australian Entomological Society, which came into existence in August 1965, and he was the Society's first President (1965 to 1967).

A colleague of Dr Mackerras described him as a "genial and kindly man" with an "intellectual honesty and uncompromising adherence to his scientific principles, coupled with a lucid, logical mind..." and who also "had a happy knack for welding individuals with different backgrounds into enthusiastic and productive research teams".

Some twelve years ago the Australian Entomological Society established the Ian Mackerras Medal to honour the memory of Dr Mackerras. The Medal is awarded to a young entomologist who is not only pursuing excellent research, but who also exhibits the personal qualities which made Ian Mackerras such an outstanding individual.

HONORARY LIFE MEMBER
DR BRUCE CHAMP

Bruce Champ was appointed Honorary Life Member of the Australian Entomological Society at the 45th Council Meeting held in Cairns. The following is the supporting text written by Vice President Peter Allen and read to the Annual General Meeting by the President Gordon Hooper.

Bruce Champ is a quiet achiever who has made outstanding contributions to the Society throughout its existence. He was involved in the formation of the Society.

He supported Courtenay Smithers and John Evans in organising a most successful meeting of entomologists attending the ANZAAS meeting in Sydney in August 1962 to propose the formation of the Australian Entomological Society - Bruce was one of the founders of the Society.

Bruce Champ, new AES Honorary Life Member.
[photo: J. Green, CSIRO Entomology]

At the request of the meeting and as a member of the Queensland Entomological Society, he undertook a survey of entomologists in Australia and analysed the results to determine the viability of a new national society.

Bruce contributed to the success of the Society by vigorously canvassing membership and by working behind the scenes to ensure a strong Society from the outset. He attended and contributed to the initial Executive meetings even though he was not on the Executive.

Bruce had the vision and was fundamental in establishing the Journal of the Australian Entomological Society. He orchestrated the smooth transition of the Journal of the Queensland Entomological Society to the Journal of the Australian Entomological Society. The Society was fortunate in having an established scientific journal within two years of its inauguration. The first issue was *J. Aust. ent. Soc.* **6**(1): 80pp (June 1967). The Journal is arguably the most successful single initiative our Society has undertaken.

Bruce served as Chief Editor until an overseas posting forced him to relinquish the position. By 1972 he had published ten volumes of the Journal as Chief Editor (*J. Qld ent. Soc.* then *J. Aust. ent. Soc.*). He resumed active membership of the journal team in 1975 as a member of the Editorial Board and is still contributing in that rôle - he has provided an outstanding long-term performance with the journal.

There are countless contributors throughout Australian entomology who have benefited from his editorial skills. He waives anonymity as a referee, despite his uncompromising adherence to the highest standards of scientific publication, and prefers to help others reach these standards rather than rejecting papers.

Professionally, Bruce has achieved international status as a stored-product entomologist and has contributed numerous basic references on stored

product pests or insecticide resistance. He is highly regarded in both developed and undeveloped countries. In recent years he has been an active member of ACIAR fostering entomological research throughout Asia by combining technical guidance with diplomatic skills. Bruce has made a substantial personal contribution to successful collaborative international aid and has enhanced Australia's reputation in Entomology.

OBITUARY

JOSEF SEDLACEK
(28 Nov 1913 - 19 Aug 1993)

When Joe Sedlacek died at the age of 79 following a tragic grass fire accident at his country home at Brookfield near Brisbane entomology lost one of its great collectors and the world lost a kind, gentle man with a passionate love for his family, for natural history and for both his first and adopted countries. The Australian Entomological Society also lost one of its Foundation Members.

Born in 1913 in the Czech farming village of Polenka in southern Bohemia, Joe was a precocious child, reared in his early years by his mother and sister while his father was caught up with the War. After attending the Realne Gymnasium (an 8-year secondary school and college) in nearby Klatovy he entered Charles University in Prague in 1932. Though already intensely interested in insects (spending his high school pocket money on the monthly issues of "Brehm's Life of Animals"), the possibility of a career in natural history was remote so he studied his other passion, literature and languages.

His interests had already focussed on beetles and during his university holidays he travelled and collected widely through Europe and North Africa. After completing his University studies he took a teaching post, with the title of professor, at his old college in Klatovy. He was later drafted into the Czech army but this was disbanded after German occupation and he returned to teaching in Klatovy. In 1944, with other intellectuals, he was forced into labouring and train monitoring, illegally (and dangerously) punctuated by collecting forays into the countryside.

Returning to teaching after the war, he married his former student Marie Sramkova on 28th June 1947. She shared his adventurous spirit and they were to be inseparable for the rest of his life. Following the communist takeover in February 1948 they determined to escape to freedom. After a first attempt was aborted by Joe's appendicitis they succeeded on 19th July 1949, crossing the mountains on foot into the then American zone of post-war Germany, leaving everything behind them, to begin an astonishing new life of adventure and travel.

Eight months later they arrived by ship in Sydney. "Freedom" was to cost the price of economic hardship, menial jobs and sleeping rough but they revelled in their new life. Joe started his new beetle collection from his first train trip to Bathurst soon after arrival, and never stopped. After servants' jobs in Sydney and a period in a migrant camp in Greta, where Joe worked in the Newcastle steelworks and their first and only child, Josef Jnr, was born, they travelled to Cairns for a year in 1952. This was their first taste of the tropics but employment was difficult to find. Finally some stability and security came when Joe got a job as a hydrographer with the Snowy Mountains Scheme. This was a beetle-collector's dream because it involved reading stream levels at many sites throughout what was then a wilderness. Now reading a stream height takes only a few minutes - and one must fill the day somehow! It also paid well and by 1956 they had saved enough for an 8-month trip to Asia, collecting all the way: tiger beetles running across tiger footprints in the Himalayan foothills; *Parnassius* butterflies at 4000 metres in Ladakh; enormous jewel beetles shaken from bare trees in Kabul; and so on through India, Nepal, Burma, Thailand, Cambodia, Malaya and Indonesia.

Eleven months after their return to Australia they received an unexpected immigration visa to the USA. Thinking that employment would be more assured they went but not before Joe visited New Guinea for a month, thinking it would be his last chance to go to that fabled natural history paradise. There Joe met, and greatly impressed, Dr Joe Szent-Ivany, then Agriculture Department entomologist and later to be influential in Joe's career. Naturally their journey to the USA was not direct but was done over several months wandering through New Zealand, Fiji, Samoa, Cook Islands and Tahiti before landing in Hawaii a few hours before their visa option expired.

JOE SEDLACEK: 1. With Marie in 1972. **2.** With son Joe Jnr. at the light sheet, Wau, 1962. **3.** With field assistant Tondamya on Mt Sinewit, New Britain, 1962. **4.** With Tondamya and Geoff Monteith, Wau, 1962. **5.** At Wau, 1965, (L.-R.), Lin Gressitt, Joe Jnr., Joe Snr., Wally Steffan, Peter Shanahan, Ray Straatman, unknown, Bukam.

Settling first in Los Angeles work was again hard to find but then Joe was appointed by Dr Ed Ross to work with the large collections of the Californian Academy of Sciences in San Francisco. Later Dr Lin Gressitt of the Bishop Museum in Honolulu appointed Joe to man a high altitude aerial "plankton" trap mounted on a plane which commuted between the USA and Antarctica, as part of his studies of insect dispersal in the Pacific region. This went on for six months with Joe sometimes spending weeks on end at the Antarctic base collecting between flights. With Gressitt, he co-authored two 1961 papers on the results of the trapping.

Then for a dedicated insect collector the offer of a lifetime came. Lin Gressitt wanted to set up a permanent collecting station for the Bishop Museum in New Guinea and asked Joe and Marie to run it. Tearing up their roots in California they moved to the small highland township of Wau in 1961, initially for two years, but it was to grow to the most exciting ten years of their life.

It was at Wau, six months after their arrival, that I first met the Sedlaceks. As a green young university student, unsure of where my future lay, I had a 2-month summer job as their assistant. It was a thrilling experience which gave me the confidence to pursue field entomology as my own career. The scale of their collecting was astonishing, and non-stop. Light traps and malaise traps were run constantly, vertebrates were trapped for ectoparasites, hand collecting with nets and beating sheets was relentless. No pinning was done in Wau. The insects were layered between lint in large cartons for transport back to Honolulu. For a time they were sent on to Taiwan where cheap labour was employed to pin them. In the first year alone the Sedlaceks sent back 100 cartons. The major collections of New Guinea insects in the Bishop Museum are a permanent testament to the energy of Joe Sedlacek. Scores of new species have been named in his honour, though the one that gave him the greatest pleasure was *Sedlacekius rex*, a new clerid (his favourite family) from Somalia named in 1972 by his Czech friend, J.R. Winkler. Another was the carabid, *Mecyclothorax sedlaceki* Darlington, which Joe collected on the bleak, bare, 4600m summit of Papua New Guinea's highest mountain, Mt Wilhelm.

Joe had a special interest in *Gymnopholus*, an endemic group of large wingless weevils mostly confined to higher altitudes in New Guinea. Isolation has produced different species on every mountain massif and the discovery of these became a challenge for him. The weevils live for years and under the influence of the perpetual mist where they live a whole garden of plants and other animals grows on their backs. Joe was co-author, with Lin Gressitt and Joe Szent-Ivany, of several papers on this strange association.

For Joe Sedlacek, Wau became the base for major expeditions into every corner of this most exciting of islands including a hasty trip to Dutch New Guinea in 1962 to make urgent collections before the country fell to Indonesia. As well it was the leaping off place for expeditions to most other island groups in the Pacific (Solomons, New Hebrides, New Caledonia, Fiji, etc), as well as several trips around the world. This included a 5-month collecting trip to Australia in 1963-64 when they freighted their New Guinea field vehicle to Sydney and used it to completely circumnavigate the continent in the days before bitumen highways were the norm. Their overseas trips in 1966 and 1970 took them to every corner of the globe in search of beetles: Asia, Africa, South America, Galapagos, Madagascar. Always their home in Wau was a refuge to return to, with its calendar-like view across the luxuriant valley to the mist-shrouded mountains beyond. In Wau they became well known to a constant stream of international entomologists who visited as guests of the Bishop Museum and who partook of their hospitality (not to mention Marie's famous cooking!).

In 1971 Joe retired and they settled on an 8-acre block at Brookfield, just outside Brisbane, building their dream house with its view of their own private bush-filled valley. There Joe set about building up his private collection, mostly by exchange with fellow collectors around the world. A nucleus for this was his own, youthful collection which he had been forced to leave behind when he escaped Czechoslovakia in 1949. It was an emotional event in the early 1970s to regain that collection which had been kept in hiding for many years.

As his private collection developed he conceived the idea of a book of "Beetle Wonders of the World". His burning motive for this was his desire to let people see the fantastic creatures which had spurred him on through his adventurous life - in the hope that if more people

were aware that such wonders existed then there would be a better chance of preserving their vanishing habitats. More than 3,200 species from his collection have been photographed by Rudy Kohout for the book and plans are advanced for its posthumous publication.

Joe Sedlacek delighted in showing off his collection. He was especially thrilled when we were able to feature part of it at the Queensland Museum's big insect exhibition in 1992. What delighted him was seeing lay people's astonishment at real creatures more amazing than even the imagination of science fiction writers. At the time of his death his collection occupied almost 1000 storeboxes and comprised in excess of 300,000 specimens. It has passed to the care of his son, Joe.

Those of us who knew and loved Joe Sedlacek know how apt was the Czech poem which Marie recited at his funeral:

I forged through my adventurous life
dreamily watching the passing clouds.
With the pleasure of a happy wanderer
I travelled the whole world.
With eager lips I savoured each passing year.

But now, at home, at home,
I will lay down to rest
as dusk gently clothes
the beloved valley of my youth.

Joe's ashes will be returned to the valley of his youth in Czechoslovakia. I am deeply grateful to Marie Sedlacek for information assisting this obituary.

Geoff MONTEITH
Queensland Museum

OBITUARY

RUDOLPH HERMAN MULDER (1917-1992)

Rudy Mulder was born on 7 September 1917 in Java, then in the Dutch East Indies, where his parents managed a plantation. At an early age he showed an interest in natural history. He received his initial education on the estate, later going to Malang and finally to Wageningen Agricultural University in Holland. He survived the German occupation, which ended his University work and resulted in the loss of his insect collection. While learning taxidermy he took part in the activities of the underground resistance movement.

After the war he returned to Indonesia and found that his father, his brother and his fiancée had died. Without success he tried to persuade his mother to go to Australia with him.

Rudy arrived in Australia early in 1952 and secured employment with the St George Council (later absorbed by the Sydney County Council) at Kogarah where he worked at clerical duties until his retirement in 1982. He lived in various southern suburbs of Sydney while working at Kogarah. He had a house built at Helensburgh during this period. Rudy took out Australian citizenship as soon as he became eligible and became a very good Australian citizen: "a top guy" to use the words of one of his former workmates.

Soon after his arrival he began collecting insects, his special interest being with Coleoptera. In a surviving notebook he listed his collecting trips between September 1968 and September 1977. Areas mentioned include Condobolin, Warrumbungle National Park, Nyngan, Moruya, Wentworth, Tibooburra, Silverton and Cobar plus many intermediate areas. In September 1975 he visited North Queensland. He made numerous visits to areas South of Sydney, notably Lilyvale.

Rudy had considerable skill as a cabinet maker, possibly not unconnected with his earlier work as a taxidermist, and made all his own insect drawers. Rudy collected mainly beetles and took a special interest in Geotrupidae in his later years. He used to visit western parts of the State, e.g. Dubbo, Grenfell, Condobolin and Bimbi, digging deep in his quest for these elusive creatures. He believed they bred in subterranean fungi. He used to travel in an orange coloured VW panel van which he had fitted out himself with a bed and other necessities, such as collecting gear. This made him independent of towns and motels, gave him extra time to collect and incidentally saved money.

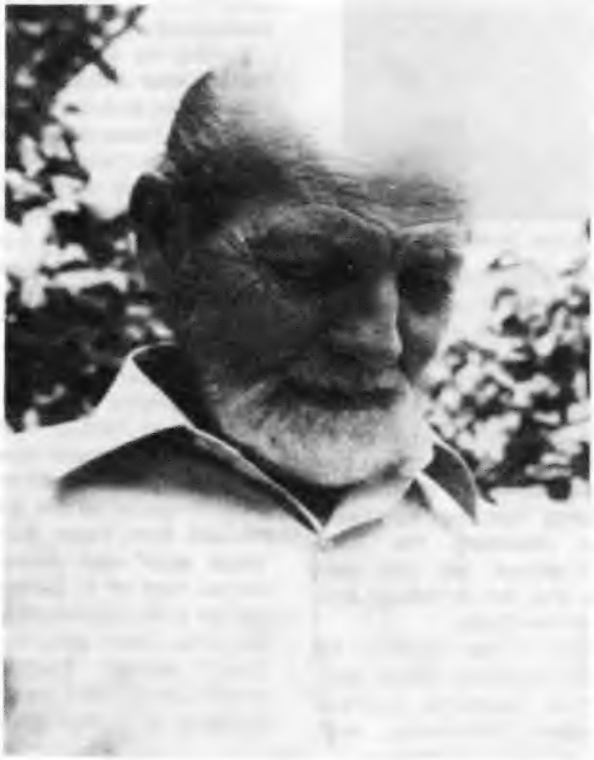
He joined the Society of Entomologists, Sydney, in 1956 and later held office as Hon. Treasurer and Council member for several years. He became a member of the Entomology Section of the Royal Zoological Society about 1979, becoming a Council member and later Hon. Secretary from 1983 until 1988. He was Hon. Secretary to the Society for Insect Studies from its inauguration in 1989 until health dictated his retirement at the end of 1991.

His interests were broad and included

membership of the Society for Growing Australian Plants, whose meetings he attended regularly. He grew many species of native plant at Helensburgh and also made observations on native fauna. When describing his experiences he was an entertaining raconteur. Although he had a wealth of natural history lore, it was difficult to persuade him to put it into print and he only left about three dozen short written contributions.

In his later years, Rudy was greatly handicapped by emphysema, which he attributed to the fact that he had been a heavy smoker in earlier years.

Rudy made a noteworthy, but unpublicised contribution to Australian entomology, especially in NSW, over a period of 40 years. He gave years of service to entomological societies in a voluntary capacity. He accumulated and curated a noteworthy collection of 16,802 beetles which he bequeathed to the Australian Museum, which is now gradually incorporating them into its collection. He also built up a very good private library especially on biological subjects, more particularly on entomology and general biology. The biological part of the library was also bequeathed to the Australian Museum.



Rudy Mulder examining freshly emerged Rosenbergia megacephala van der Poll (COL: Cerambycidae) March 1985. [photo: B.L. Brunet]

Clarrie CHADWICK
Entomology Department
The Australian Museum

CONSERVATION COMMITTEE REPORT

The first stage of a national survey to list official projects relevant to invertebrate conservation is continuing. Of 35 state and federal agencies approached 23 have replied. These replies have yet to be entered into a database and circulated to members of the Committee for checking. A few replies are obviously incomplete and state members of the Committee will follow up to ensure fuller coverage.

The first stage of the survey did not address museums and tertiary education institutions. This will be done eventually. To assist in this I would greatly value receiving name and address details of likely university departments or units to approach to complement details that can be gained from published lists of tertiary institutions.

The NSW North East Forest Alliance approached the Society for help with a court action concerning the Dorrigo Management Area. The views of Committee members were sought. In the final event the Committee did not need to become directly involved.

Lionel HILL
Convenor

Fleshing out a beetle
Platypus tuberculosus

Report to the Executive on 1992 AES Research Grant awarded to D.S. Kent.

P. tuberculosus larva, head end

I am currently completing a part-time Master of Science (Agriculture) degree by research at the University of Sydney. The thesis is entitled "The biology and ecology of three ambrosia beetles (Coleoptera: Platypodinae) attacking the heartwood of living Eucalyptus species."

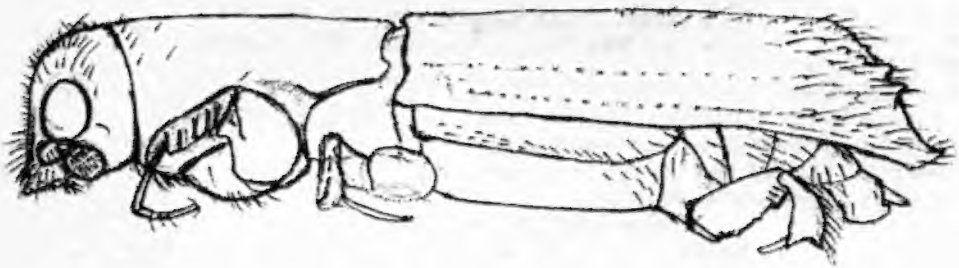
In February 1992, the Australian Entomological Society awarded me a grant to further my knowledge on ambrosia beetles (Subfamily Platypodinae) by providing funding to travel around Tasmania after attending the 23rd Scientific Conference in Hobart. My visit was divided into two sections: the first in Hobart and the second in the North of the State.

During my stay in Hobart I was assisted by Richard Bashford, a Senior Technical Officer with the Forestry Commission of Tasmania. Richard arranged visits to several collections, and organised field work in the Northwest of the State. In Hobart I visited the Commission's insect collection and searched for specimens of *Platypus tuberculosus*, a species rarely collected in Tasmania. I also visited the collections of the Department of Primary Industry at New Town and the Art Gallery and Museum of Tasmania in Hobart. Unfortunately, I found no further specimens of *P. tuberculosus* in any of these collections. I am indebted to the staff at all the Institutions for making the collections available.

During my visit to the Forestry Commission's Head Office I discussed the current direction of Tasmanian ambrosia beetle research with Richard Bashford. I was also able to discuss past research with Steve Candy who recently completed a masters thesis on *P. subgranosus*.

While attending the Conference's field day in the Florentine Valley, I observed *P. subgranosus* attack on *Nothofagus cunninghamii*. This ambrosia beetle has been linked to the spread of "myrtle wilt" in Tasmania's *N. cunninghamii* forests.

The second stage of my visit began in Smithton, a forestry town in the far north west of the State. I hoped to find *P. tuberculosus* in the local *Eucalyptus* species here. I was assisted in this venture by Jill Packham, Rodney Medwin and Gary Hingston of the Smithton Forestry Office. I learned from them that a timber defect called "black spot" was found in *Eucalyptus ovata*, a known host of *P. tuberculosus*. Fungal staining can be a characteristic of ambrosia beetle attack on living trees and, in NSW, this is known as "pencil streak". Further discussion about the incidence of "black spot" in *E. ovata* confirmed its similarity to "pencil streak" which occurs in *E.*



P. tuberculosus adult. [illus. D. Kent]

cypellocarpa, the host of *P. tuberculosus* in NSW.

While in Smithton I went on two field trips in search of *P. tuberculosus*. The first, on 11 February in the company of Jill Packham and Rodney Medwin, was out along the Frankland road where we found evidence of ambrosia beetle attack on the cut end of an old felled *E. ovata* log beside the road. It appeared to be a typical *P. tuberculosus* gallery system, but no beetles were present. It was then decided to fell several live trees at another site across the road from a logged area which had shown a high incidence of "black spot". The first tree felled showed no evidence of "black spot" in the butt cut. However, Rodney Medwin indicated that the butt section of the logs with "black spot" was usually clear, so a second cut was made just below the crown of the tree. Evidence of beetle attack was found in this cut although the attack was not active. With this information in mind the next tree felled was slightly smaller in diameter, in the hope that attack might be active in a smaller tree. Again the butt section was clear and the cut below the crown showed inactive beetle attack. We continued cutting down towards the butt and located an active colony. All stages of the beetle were collected.

The following day, I collected more beetles, accompanied by Rodney Medwin and Gary Hingston. We headed out to another area along Wuthering Heights Road. Once again the chosen site was in a logged area with *E. ovata*. As before, a small diameter tree was selected for felling. The dissection process employed on both days involved cutting discs progressively down towards the butt end of the log and collecting adult and larval material. The third disc cut from this tree revealed an active colony. A large proportion of the adults collected from this tree were tenerals (newly moulted adults) which confirmed a late summer - early autumn emergence period in Tasmania, similar to *P. tuberculosus* in NSW.

During my discussions with Rodney Medwin it became apparent that another ambrosia beetle was attacking other living eucalypts in the area. Rodney had mentioned that *E. obliqua* also exhibited "black spot", although it did not occur as commonly as in *E. ovata*. He had recently seen an *E. obliqua* log with "black spot" at the Kauri Mill, Smithton, and arranged a visit to inspect it. Initially, I thought that the ambrosia beetle causing the damage might be *Austroplatypus incompertus* (Schedl), a species which attacks *E. obliqua* on the mainland. Discs were cut from this log as time constraints prevented any further field work. When the tunnel system was exposed, it was obvious that the damage was not caused by *A. incompertus*; the hole diameters were much too small and the gallery system had vertical tunnels (*A. incompertus* only tunnels in the horizontal plane). I then considered *Notoplatypus elongatus* Lea, a wide ranging species, both in distribution and in host species preference, which has vertical as well as horizontal tunnels. However, when the pupal chambers were exposed they were of the platypus type, and as *N. elongatus* has very distinctive pupal chambers, this species was eliminated. The gallery system exposed was not active but several dead adults were found in the black stained tunnels. Only one adult was found entire, although several more were in pieces.

So, what species of ambrosia beetle was it? A closer look at the specimens in the Smithton Forestry Office indicated a possible new species. Further study since my return indicates that it is indeed a new species, closely related to *P. subgranosus* and *P. tuberculosus*. It is morphologically similar to *P. subgranosus* but attacks living trees as *P. tuberculosus* does. More specimens will be needed before this can be confirmed and a new species described.

In summary, the support from the Australian Entomological Society enabled me to:

(a) gain more information on past and present ambrosia beetle research in Tasmania,

(b) collect specimens of *Platypus tuberculosus*, a species rarely collected in Tasmania and,

(c) collect a probable new species of ambrosia beetle, the first for about 40 years.

P. tuberculatus larva, rear view

Debbie KENT
State Forests of NSW

REGIONAL NEWS

AUSTRALIAN CAPITAL TERRITORY

ANIC and ANU

In an effort to simplify data gathering for *Myrmecia*, I circulated all potential subscribers by Email requesting contributions to be returned via the ether. The prompt response of Bruce Halliday constrains me to start with *Contributiones Acarologicae*.

The primary news is of expansion: joining **Ting Kui Qin** (postdoctoral researcher on redlegged earth mite systematics) and **Katie Strong** (PhD on mites phoretic on cockroaches) are two faces, one familiar, one new. The new CSIRO program on "Soil Fauna Biodiversity" (at least that is the title Ebbe gave me) will allow the Division to move **Barry Longstaff** in as ecologist and to recruit **Matthew Colloff**, of the Scottish Parasite Diagnostic Laboratory, Glasgow, as biosystematist. Matt visited Australia and gave one seminar on the taxonomy and biogeography of a genus of Oribatid soil mites (*Camisia*) and a second on the domestic ecology of house dust mites. He presented the results of some very modern immunological techniques and provided some sensible suggestions for their control. Nice to have some biology in the immunological arena - Matt will not only be an interesting addition to the acarologists, but will complement and extend the informal insect allergy group of bibliographer **Tom Bellas** and your correspondent's lunges into midge haemoglobin allergy. CSIRO sneezers (and there are many) ought to book now for consultations.

Amidst all this soil biodiversity bureaucracy, Bruce had the time to visit Adelaide to retrieve a loan of 5,000 slides of mites ectoparasitic on grasshoppers, which have been used in a long series of publications by **Ron Southcott** and **Ken Key** on their systematics and host/parasite relationships. On the way back Katie and Bruce stopped to dig a few holes to collect mites associated with burrowing cockroaches and beetles.

Ting Kui Qin has visited Perth and, in a separate trip with **Jürgen Otto**, most parts of NSW to collect redlegged earth mite and related species. Jürgen has also been to Alice Springs collecting anystid mites for his PhD work on their taxonomy and biology. Jürgen is quite familiar with the vagaries of the Australian climate, having been here twice before, even driving the Canning Stock Route, but I think he was unprepared for the amount of rainfall the "Red Centre" experienced this year.

Ting Kui put his old hat on in order to deliver a seminar on his use of phylogeny to predict the native range of the (misnamed) "Chinese" wax scale. An excellent seminar, with serious implications for several national programs, was attended by a full turn out of the Taxonomy and General Biology Sections, but unfortunately a paucity of potential beneficiaries of his technique. The same could not be said of the seminar given by visitor **Jeff Lockwood** (a stimulating Visiting Fellow from the University of Wyoming at ANU, based in CSIRO) who gained an impressive attendance when he presented a sceptical scientist's perspective on some biocontrol activities contra-grasshoppers in North America. Stimulated by some negative responses to this talk, **Peter Cranston** addressed the staff on the perplexing relationships (or lack thereof) between taxonomy and ecology (or taxonomists and ecologists). A week later, **David Yeates** (postdoc on Diptera for a few more months yet) took up and redirected the theme with a staff talk on Biodiversity, Comparative Biology and Systematics.

There have been other meetings during the period, notably one held at the University of Canberra by **Richard Norris** on "The Use of Aquatic Biota to Assess Water Quality" and the following week the Ecological Society of Australia (ESA) met in Canberra. There were many entomological contributions at both. My vivid memory is of an iconoclastic **Sam Lake** raising and demolishing Nearctic-origin, all-embracing community theories at the rate of one-a-minute for 20 minutes. **Tony Underwood**, unfortunately neither an entomologist, nor a stream ecologist, was an equally impressive participant in both meetings.

It seems to have been a reporting period full of meetings and seminars, with the honours students at ANU Botany and Zoology (BoZo) delivering their final seminars and recently completing their projects. Entomological contributions this year included **Kendi Davies** (who is now on some windy island near Antarctica), **Brett Melbourne** (with an assessment of Rapid Biodiversity Assessment as a conservation tool) and **Mick**

Smith (investigating what happens when acid input to a Kakadu stream is "turned off").

Jo Berry recently delivered her final PhD seminar to BoZo, presenting more biocontrol conclusions from her studies on the "Systematics of Australasian Eunotinae". There are illustrations all over her desk - we wish her success in writing up. For **John Trueman**, the writing is over and his fate is in the hands of his examiners. John can now devote his full time to analysing other people's data sets, oops, I meant the Biodiversity assessment program. Actually, it isn't really appreciated around here that so many areas of research have come to rely on John's data manipulation skills - molecular as well as morphological. A niche must be found for these rare skills - all offers will be considered. **John** and **Wendy Lee** are presently taking the "summer" samples of Tasmanian biodiversity for the DEST project that terminates at the end of the year. Biodiversity sampled but not analysed either rapidly or slowly on this time scale!

Penny Greenslade didn't object to my last brief description of her as "being so busy that I'd lost track of her activities" but has provided an electronic contribution to this report: "I was in the States (Oregon State University, Ohio State University) in August, visiting labs where work was being carried out on relationships between soil fauna and sustainable agriculture and forestry. In September I went to 2 meetings in the UK, the RESL at Rothamsted (Insects and Environmental Change) and Long Ashton (Arable Ecosystems for the 21st Century) and had a poster (the same at both!) on work at Cowra on soil microarthropod changes with different tillage treatments. I then returned to Oz for a meeting on "Management of Relict Lowland Grasslands in the ACT" and the ESA meeting in Canberra. Four meetings in as many weeks with a transglobe flight in between, never again! Have been sleeping in front of my microscope and computer ever since." I couldn't improve on that (beyond correctong a spatteringg of typos) so you get it *verbatim*!

No other electronic responders to the plea for material, for which there are two possible explanations: the first is lack of interest; the second, the knowledge that I'll invent the contributions anyway - so I'll take that liberty and here goes .... **Ebbe Nielsen** buzzes around the country on CRC and other administrative business (I have a list provided by Ebbe, available on demand), but he and **Ted Edwards** did manage to get into the field, seeking and finding (are they really so rare?) Castniidae in the Flinders Range. As in so many of NSW National Parks, they reported that the sound of goats was constant and the carpet of *Echium* reached from horizon to horizon. Certainly the same was true of Cocoparra which I visited briefly in order to feed mosquitoes - yet another park for ferals.

Of course, other people have been in the field. **Chris Reid** has been in Indonesia again, and has successfully obtained UK funding (a prestigious Banks Alecto fellowship to be precise) for an extended collaboration with the Bogor Museum. **Eva Bugledich** scouted around in the Macleay Collection and Australian Museum for type data for the Nematocera catalogue and returned with a new respect for the organisation and curation of our collection. **Dave Rentz** has returned from his trip to Cape York on the CYPLUS project raving about the area, and **Marianne Horak** has just left to check for herself. Marianne was in Europe for an extended research visit, so I'd guess some clean air and native bush will be a relief from concrete and smog.

The division seems to be quite busy with scientists travelling to visit us: **Cedric Gillott** (University of Saskatchewan, Canada) is here for six months to revise his entomological textbook, a book that might face some stiff competition from a new, up-and-coming Chapman and Hall text, "The Insects - an Outline of Entomology", a sort of replacement "Imms" illustrated by **Karina Hansen McInnes** and written by two unnamed authors located not too far from the keyboard of this PC (ha, there has to be some compensation for this task!). Other visitors include Canadian **Robin Leech** who is aiding Bruce on some spider curation and **Adam Slipinski** of the Polish Academy of Sciences who is working with **John Lawrence** on a diversity of beetle projects. Just the other day I saw John training some Macquarie RBA personel and I wondered whether **David Yeates**'s assessment of RBA as means of re-inventing taxonomy from scratch had more than a grain of truth to it. Well, traditional taxonomy has been profligate with its expertise and the visit of hymenopterist **Mick Day** to ANIC reminds us of a spectacular case of waste. For those readers with an interest in such matters, I commend Zac Erzinçlioglu's excellent editorial in *Journal of Natural History* **27**: 989-992 entitled "The failure of

The Natural History Museum". Let's learn by other people's failures and not repeat their errors. Talking of which, I'm told that Dr **Alan Emery**, Director of the recently savaged Canadian Museum of Nature visited Canberra - I can't report on the content of his pretentiously titled address to the National Museum of Australia because the abstract was so lacking in science and filled with modern management clichés that I found the invitation to attend resistible.

Finally (since no-one else has briefed me) we can congratulate **Paul Cooper**, microinsectphysiologist at ANU on attaining a tenured position at BoZo, against some strong competition. To the short-listed, but unsuccessful candidates, good luck in pursuing your careers: Australia is lucky to have such talented entomologists and needs to retain them if our discipline is to progress.

Peter CRANSTON
Regional Councillor

CSIRO Division of Entomology

The second Canberra *Bacillus thuringiensis* Meeting, organised by a committee of CSIRO Entomology staff headed by **Ray Akhurst**, was held at the ANU in mid-September. It attracted some 120 delegates from around Australia and from nine other countries, and by all assessments was a very successful conference. Proceedings of the Meeting will contain papers by each of the invited speakers and summaries of the open forum sessions which were a feature of the event; they will be posted to delegates and available for purchase in March 1994.

On the topic of Bt research and caterpillar management strategies, **Leon Court** has recently joined **Ray Akhurst**'s group to assist in a project investigating novel Bt toxins. Meanwhile **Joanne Daly** is now hosting a 9 month visit by **David Pree** from Agriculture Canada who is looking at interactions of Bt and endosulfan. She and **Gary Fitt** are also co-hosting and working with **Rick Roush** from Cornell University, NY, who is visiting Australia until May 1994 on a McMaster Fellowship. Rick will study use and management of insect resistant transgenic cotton plants and will make the most of the sunshine by spending summer in the field at Narrabri! Rick has himself just attended/presented at the "Biotechnology for Integrated Pest Management" meeting held at the Rockefeller Foundation's Bellagio Study and Conference Centre at Lake Como in Italy. **Max Whitten** presented the key-note address to that conference, a paper jointly authored by himself and **Richard Jefferson** of Cambia, entitled "An Overview of the Needs and Opportunities for Linking Biotechnology and IPM in Developing Countries".

Elsewhere in the Division (or out of it, as the case may be), **Tony Watson** has had a typically active last few months, attending dragonfly conferences in Japan at Osaka and Kushiro and, with **Leigh Miller** and **Brian Fletcher**, a conference in Darwin on *Mastotermes*. Tony then visited the Office of the Supervising Scientist at Jabiru, where he continued work on the long-term dragonfly project on which he is collaborating with **Peter Dostine** (OSS, Jabiru) and **John Hawking** (Murray-Darling Freshwater Research Centre, Albury). In between these trips he managed to fit in a wildflower viewing holiday in WA with his wife - the tour route just happened to pass through the very limited area where *Coptotermes brunneus* is found. **Vance Brown**'s subsequent work on those specimens has revealed details of their highly distinctive cuticular hydrocarbon profiles.

The Division's Stored Grain Research Laboratory was recently awarded the Sir Ian McLennan Achievement for Industry Award in recognition of the lab's contribution to the on-going success of the Australian grain industry. **Jonathon Banks** accepted a medal on behalf of the laboratory at a special ceremony in Sydney. **Robin Bedding** was awarded a Certificate of Commendation at the same ceremony, for his work on the use of parasitic nematodes to control a range of insect pests. **Jonathon Banks** has just returned from Washington and the latest meeting of the UNEP Methyl Bromide Technical Options Committee, of which he is the chairman. He reports that methyl bromide is indeed on the way out, and that there are options for alternative treatments. He and **Peter Annis** attended GRDC-organised meetings in Toowoomba and Wagga Wagga respectively, each of which concerned standards of silo manufacture for insect control.

In other news from that group, **Bob Winks** has returned to work following his hip replacement operation, and is now hard at it again, planning more Siroflo fumigation trials. **David Rees**, formerly of Natural Resources Institute in the UK, has joined the lab on a short contract to work on several topics, but most particularly on the psocids

which are becoming quite a problem in grain storage situations in Australia. He has also just finished a stored product insect identification poster that is sure to be a hit with grain storers, food processors and educators. **Len Caddick**, formerly of the Academy of Grain Technology in Werribee, has joined the lab to help coordinate and run the enormous number of field trials that are planned for this harvest.

The 6th International Conference on Stored Product Protection will be held in Canberra 17-23 April 1994. **Jane Wright** is hard at work organising the scientific sessions for that conference, and reports that over 280 papers have now been submitted. Further details of the meeting can be obtained from Dr **Bruce Champ**, at ACIAR (fax 06-257-3051) (see details page 27).

Barry Longstaff has also been out and about, making a project development visit to Indonesia with **Peter Annis** and **Geoff Norton** and **John Turner** (CTPM), a visit to China with **Merv Bengston** and **Greg Daglish** for an ACIAR project review, and attending the "Arable Ecosystems for the 21st Century" conference in the UK.

The Weeds Group report that they are about to release the French weevil *Lixus cardui* to assist in the on-going battle for control of Scotch Thistle. This agent will augment the efforts of *Larinus latis*, which was released last year, and whose establishment in the field has just been confirmed (and celebrated!).

Finally, a small quiz... Which entomologists from the Division (helpful clue: Roger and Rob) recently christened their mobile phone by requesting release from a Victorian sewage treatment plant? Please forward all correspondence to those you believe were involved!

David DALL
Regional Councillor

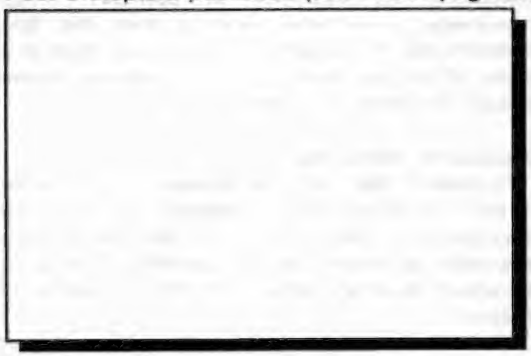
NEW SOUTH WALES
Metropolitan

Biological & Chemical Research Institute, Rydalmere

With the arrival of Western Flower Thrips, *Frankliniella occidentalis*, in Western Australia, followed soon afterwards by records from southern Queensland, intensive monitoring of flower growers in the Sydney region was commenced in September. By early November the first specimens from Sydney were identified although, at this stage, the species is still very localised. **Steve Goodwin** has been coordinating the survey and preparing for the arrival of this new and serious pest while **Peter Gillespie** has been doing the identifications. Now NSW is preparing for the expected movement of *Thrips palmi* into the North Coast from Queensland.

Victor Rajakulendran attended the International *Bt* conference in Canberra in September and spoke on the use of *Bt* in Australian vegetable crops. Victor will also have Mr **Myint Swe**, Deputy Supervisor (Plant Protection) in Myanmar (formerly Burma), with him for five weeks early in 1994 as part of an FAO sponsored training program in IPM.

Graeme Baker has his hands full monitoring hatching bands of Australian Plague Locust and Wingless Grasshopper and has just had an Orthopterists' Society Field Guide to the Australian Pest Orthoptera published (see details page 28).



State Forests of New South Wales

Bob Eldridge has returned from three weeks leave and is being punished for taking time off by the ever increasing pressure from the organisation to turn him into an accountant. After a recent two day course on Co-operative Negotiation for Enterprise Bargaining he is looking forward to two days of Business and Strategic Planning followed by two days of Financial Management Training.

The possibility of an invasion by Asian Gypsy Moth (AGM) almost came as a welcome relief. Bob has been involved in deliberations regarding the potential threat to Australian forestry posed by AGM and current AQIS policy to deal with the problem.

Management of data being generated by the Eucalypt Plantation Pest and Disease project is

developing into a major project in itself. Currently 3000 trees are being sprayed and these, plus another 1000, are also being measured and assessed for insect and fungal damage each month.

Development of an "accelerated field simulator" incorporating our main termite pest species, *Coptotermes acinaciformis*, will be a major project over the next 6 months.

Darren Waterson attended the second CSIRO "Collection and Curation course" on 20-24 September, 1993. Darren also made a brief but distinctive cameo appearance on the ABC TV program Quantum on 20 October. The scenes had been filmed earlier in the year while participating in fieldwork in PNG when he was on "secondment" with the Army Malaria Unit.

Christine Stone and **Chris Ann Urquhart** have been collecting closely with **Keith Taylor** (ANIC) over the last few months, with Keith providing invaluable identifications of psyllids. The specimens have been coming from the Bell Miner/Psyllid study being carried out by them in a stand of Sydney blue gum forest suffering crown dieback in Olney S.F. near Wyong.

Macquarie University

Dr **Julia Porter** from the Climate Impact Centre in the School of Earth Sciences has won the prestigious 1993 Norbet Gerbier-MUMM International Award. Julia is currently working on the effect of climate change on the distribution of malaria.

Nick Waser and **Mary Price**, from University of California, Riverside, arrived in September for a 6 month sabbatical in the School of Biological Sciences. Nick's interests include pollination ecology which he hopes to pursue during his stay.

Other News

I have been contacting amateur collectors with the aim of getting them to contribute to *Myrmecia*. To my disappointment everyone I spoke to is no longer a member of the Society since they felt it had nothing to offer them. Should this being telling us something?

Lou RODGERSON
Regional Councillor

CERIT, Bioscience
University of New South Wales

It has been very busy at CERIT due to the seasonal spring increase in contract work - but enquiries would suggest that there is a shift in the economy for the better. Much of the new work concerns mosquitos and **Julie-ann Short** has been breeding large numbers for product testing along with all her other duties. **Patrick O'Rourke** has been running the aerosol chamber almost continuously, testing products on flies and mosquitos. CERIT'S other **Julieanne (Farrell)** who has been a voluntary worker here for some time has been employed on a part time basis - building new testing chambers - with some peripheral entomology thrown in! **Martin Shivas** is making progress with his Wool Research and Development Corporation supported project on the electrophysiology of *Lucilia* in relation to resistance to pyrethroid oviposition suppressants.

Rowena Bower, CERIT'S honours student is engrossed in writing up her thesis and **Jenny Anderson** has been to Brisbane to talk to **David Kemp** and **Peter Allingham** (CSIRO) about buffalo fly culturing and to **Peter Green** (Department of Primary Industries) about blowfly trapping. **Lynette McLeod** gave a talk on her blowfly work at Fowlers Gap and Mootwingee National Park to the NSW Entomological Society in October.

Stephen Fellenberg has just returned from the ANIC entomology training course. He reports that it was fascinating and thoroughly enjoyable. **Chris Orton** labours on to keep CERIT afloat and its name in the limelight.

Take note that several thousand of CERIT'S flies, *Chrysomya rufifacies, Calliphora dubia and Musca domestica*, (to be exact) are to become film stars beside Ruth Cracknell!

This quarter there have been many visitors to CERIT who have come to discuss product testing and development with **Chris Orton** and other senior staff.

Congratulations to **Jonathon Banks** and **Robin Bedding** (CSIRO Entomology) for winning the 1993 Sir Ian McLennan Achievement for Industry Awards.

NEW SOUTH WALES
Country Areas

Tweed Shire Council

Clive Easton, Entomological Control Officer, reports that the long North Coast drought has caused changes to wetland ecology. These have

favoured several saltmarsh breeding mosquito species that are quick to utilise the changed habitats. Extensive larvicide applications with *Bti* were necessary late in the mosquito season following rainfall and tidal surges associated with **Cyclone Roger**.

Trials with slow release formulations of methoprene are being carried out to assess periods of emergence inhibition for several saltmarsh mosquito species breeding in varying habitats. Trials looking at the effects of regular beach raking as a means of reducing canal estate breeding biting midge have been carried out over the last year. This technique is looking encouraging in reducing larval populations of this annoying insect.

Agricultural Research and Veterinary Centre Orange

Entomologists associated with pome fruits (apples and pears) gathered at Australia's Big Apple (Orange) on May 18 to discuss current and future research. Host **Graham Thwaite** reports that the meeting discussed the complex pest control problems facing the industry, as well as progress being made towards pesticide reduction through implementation of Integrated Pest Management.

Bill Woods (WADA) extended his stay at Orange in May to brief **Graham Thwaite** on the progress in the campaign to eradicate Codling Moth from Western Australia. Graham was involved in formulating the eradication strategy following discovery of the pest at Bridgetown in January.

Graham Thwaite and Bathurst based Research Assistant **Adrian Nicholas** made the trek to Melbourne in late June to participate in a review of progress in the Codling Moth IPM investigation coordinated by CSIRO Canberra. The review had input from CSIRO, South Australia, Victoria, Tasmania, Queensland and New South Wales.

University of New England
Department of Zoology

Stephen Asante attended the Society's conference in Cairns where he presented a paper titled "Sex Ratios in Natural Populations of *Aphelinus mali* in Relation to Host Size and Host Density".

University of New England
Department of Agronomy and Soil Science

Alice Del Socorro and **Peter Gregg** attended the Society's conference in Cairns where she presented their joint paper titled "Behavioural Responses of *Mythimna convecta* Males to Calling Females and Synthetic Sex Pheromone."

Peter Gregg has developed, in conjunction with UNE's Electronic Services Unit, a portable field incubator based on the standard car cooler/warmer. A controller based on a microprocessor has been incorporated into the outer wall of the standard car cooler/warmer cabinet so that its temperature can be maintained at a predetermined level. One external control can set the cabinet temperature anywhere between minus 5 and 50 degrees Celsius. A bench power supply can also be fitted to allow the incubator to be used in a laboratory. Anybody who needs to transport live material around Australia and wants them to arrive in good condition will find this new incubator invaluable. Further details are available from Peter.

Narrabri Agricultural Research Station

The new format of the Summer Crops Resistance Management Strategy was ratified at a meeting held at the Research Station on the 25th June. The introduction of the new *Helicoverpa* Identification kit (the Lepton Test Kit® marketed by Abbott) has offered the opportunity for some deregulation to occur. The new pyrethroid window will now begin on the 26th December but will still close on the 13th February as at present, and there will be no restrictions on pyrethroids for pests on any other crops. The basis of the new Strategy is now technological rather than biological, relying on precise targeting of the appropriate spray for the *Helicoverpa* species encountered, rather than a strict adherence to a generation based fixed window spray period.

Neil Forrester's resistance research group figured recently in a NSW Agriculture video production detailing the Department's *Helicoverpa* Insecticide Resistance Monitoring Programme based at Narrabri Agricultural Research Station.

In March **Neil Forrester** attended the Chinese Ministry of Agriculture Pest Resistance Monitoring and Management Workshop held in Beijing. He will lead an International Organisation for Pesticide Resistance Management delegation to

China in September/October to review the insecticide resistance problems in the intensive eastern China cotton production systems of the Yangste and Yellow River valleys. The aim of this mission will be to prepare a detailed document for submission to international funding organisations, defining the extent of the resistance problem and outlining possible countermeasures.

Robert Mensah was very busy in the 1992/93 cotton season developing a technique to utilise natural enemies of *Helicoverpa* spp as basic components of the IPM program he is developing for cotton. He has completed the first and second stages of the IPM program and results so far look very promising. The third stage of the program will commence in the 1993/94 season on a larger scale. There will, he thinks, be about five stages in the development of the IPM program before its implementation, compared with four on boronia, due to the complexities in the host/natural system in the cotton agroecosystem.

In July Robert attended the Society's conference in Cairns where he presented a paper co-authored by **John Madden** of the University of Tasmania and titled "Life History and Biology of *Ctenarytaina thysanura* (Hemiptera:Psyllidae) on *Boronia megastigma* in Tasmania".

CSIRO Cotton Research Unit, Narrabri

In late June **Gary Fitt** facilitated a meeting at Narrabri involving the Western Australian Dept. of Agriculture, CSIRO, NSW Agriculture and various cotton industry representatives to discuss a feasibility study of the prospects for resuming cotton production in the north-west of Western Australia. All aspects were considered, including political questions regarding land titles in the area. Follow-up evaluation studies and hopefully some research will follow.

CSIRO has just released a new 30 minute video entitled "Caterpillars and Cotton" which documents the interaction of *Helicoverpa* species with cotton production in Australia. Produced with funding from cotton industry bodies and CSIRO, the video traces the impact of *H. armigera* and its resistance to pesticides on cotton production in the Ord River region and in eastern Australia. It highlights the recent changes in pest management with greater reliance on integrated use of ecological factors, together with pesticides, for management of *Helicoverpa*. Research of **Norm Thomson** (CSIRO cotton breeder), **Neil Forrester**, **Gary Fitt**, **Joanne Daly** and **Peter Gregg** is covered. Copies of the video are available from CSIRO Information Services, Melbourne.

Gary Fitt, **Martin Dillon**, **Gina Dillon**, **Colin Tann**, **Cheryl Mares**, **Lewis Wilson** and **Wayne Rochester**, all of CSIRO Narrabri, participated in the recent Entomological Society conference in sunny Cairns. All presented papers or posters. A few extra days were spent surveying the coral reefs and rainforests for *Helicoverpa* moths. Unfortunately none were found.

Yanco Agricultural Institute, Yanco

The latest round of industry funding has been kind to Entomology at Yanco with two new projects receiving the nod. **David James'** on biological control of grapevine mites will now be expanded to include all major viticultural regions of Australia. It is expected that this work will make miticides redundant in viticulture, thus saving the industry $2.8M per annum, also to further develop David's appreciation of fine wines! David's work on pheromones of Spined Citrus Bug and the Assassin Bug *Pristhesancus plagipennis* has also received further funding.

Entomological research at Yanco was showcased at the Murrumbidgee Farm Fair held in April at the Institute. Considerable interest was shown by the public in the display of pests and natural enemies. A popular attraction was the butterfly tent which housed an impressive display of living tropical butterflies, including the Cairns Birdwing.

During May an as yet unidentified eulophid wasp was discovered inflicting reasonably high parasitism rates on Citrus Leaf Miner in the M.I.A.. The wasp is not one of the recently introduced parasitoids and is presumed to be a native species.

Richard Faulder was at the Western Australian Museum in Perth during May, continuing his research on mouse spiders and obtaining advice from **Barbara York Main**. After attending the Entomological Society's Conference he was then back at the Australian Museum for another week of fondling pickled spiders.

Richard FAULDER
Regional Councillor

NORTHERN TERRITORY

Northern Territory Museum of Arts and Sciences

Graham Brown and **Jenny Webber** have spent a few days with naturalist **Ian Morris** deep in the bowels of a bat-infested cave near Oenpelli in Arnhem Land. Many years ago Ian saw and sketched a bizarre creature in the cave and was informed that such things do not exist outside of a Spielberg movie. More recently he confounded matters by capturing one alive and it turned out to be a nymph amblypygid. The most recent expedition captured a larger nymph and spotted a couple that got away.

In early October Graham accompanied a general quarantine survey to Nhulunbuy but failed to find anything of interest, which was the desired result. It's a terrible time of year to be looking for insects: very hot, dry and oppressive. It would have been much more pleasant to have spent the days in the air-conditioned bar of the Nhulunbuy Yacht Club. Perhaps he did? [*our Graham? - Ed.*]

Office of the Supervising Scientist Alligator Rivers Region Research Institute

Peter Dostine has just returned from a brief foray to Canberra to attend a conference on "The Use of Biota to Assess Water Quality", held at the University of Canberra. Dr **John Wright** of the Institute of Freshwater Ecology, Dorset, England, dropped into Jabiru for a week on his way home from the conference to witness at first hand the arid phase of this monsoonal landscape, and to provide us with further insight on biological monitoring in streams.

Other visitors from temperate climes included **Tony Watson** from CSIRO ANIC and **John Hawking** from the Murray-Darling Freshwater Research Centre, here briefly to track down the few remaining unassociated odonate larvae.

CSIRO Division of Wildlife and Ecology

Alan Andersen has just returned from four months in the USA, studying, talking and writing ants. He spent four weeks carrying out a field project in Arizona comparing ant community ecology in the US with that in Australia. Australian ants won in a landslide. A couple of months were spent at Harvard writing about ants, and he gave talks about ant community ecology at ESA meetings at Madison, Harvard, the University of Washington in Seattle, UCLA Davis, and Stanford. On his return to Australia, he found that his book, coauthored with **Peter Jacklyn**, on "Termites of the Top End" had just hit the streets. Termites? Oh, white ants!

CSIRO Division of Entomology Tropical Ecosystems Research Centre

The last few months have been rather *Carmenta mimosa* centric at TERC. Having recently recovered from a brush with a misdirected herbicide spray, this stem-boring sesiid is now patchily established along the Finniss River. A number of monitoring sites and a couple of transects were set up in collaboration with the DPI&F Weeds Branch to measure dispersal from the population centres. All involved have their fingers crossed about the potential of this insect, particularly after the effort required to re-establish it. You can imagine our horror when the owner of the property rang to say that a fire on a neighbouring property had jumped the river and burnt through the main site. A very grim **Grant Farrell** and **Piers Barrow** (DPI&F) took the long drive out there the next day. Initial fears appeared justified as the site was approached, but luckily a track bordering the site had acted as a firebreak, stopping the flames just 2 metres from the first plants. Even the nearby *Apion* release sites escaped harm. Work started in October to experimentally release *Carmenta* onto the Adelaide River floodplains. Larvae bred in Brisbane have now been released at three sites.

Grant Farrell has spent the last month coding up the mimosa population model, and preliminary runs of data suggest that the programme is ready to test. **Mark Lonsdale** and Grant need to find a spare week or so to sit down and play with it. With a bit of luck (and perhaps judicious removal of phone connections) this should be achieved by the end of November.

The Division of Entomology conducted an internal review of its research effort in August and both Mark and Grant travelled to Brisbane in September to discuss the implications of the review for the future directions of the Weeds Section. Prior to the meeting they visited the CSIRO's Long Pocket labs to discuss mimosa issues with **Wendy Forno** and **Tim Heard**.

Recent visitors have included **Lee Miller** from the termite crew in Canberra who are in town this week. **Veronica Bracatini** from Brisbane is again

in Darwin on the hunt for *Icerya* biological control agents. Thanks to her for hand-carrying a shipment of *Carmenta* from Brisbane for us. **Dr Yamane**, a Japanese social wasp biologist, has arrived for a ten day visit. His colleague Prof. **Yosiaki Ito** from Okinawa University arrives in Darwin in December for five days to make field observations on *Ropalidia* spp.

And for those of you who await news on the Mimosa Formation Bogging Team - we have expanded. **Suzanne Gall**, formerly of DPI&F, has moved down the road from Berrimah Farm to TERC. In the short time she has been with us she has already been to Brisbane as part of the *Carmenta* release work, has demonstrated fine skills with tanglefoot, acquainted herself with the contents of mimosa litter trays, and most importantly, shown herself as capable as the rest of us in keeping Lonsdale in his place. **Annie Lane** has just finished experimental work on the impact of herbicide application on mimosa and native vegetation seed bank germination. Annie is feverishly analysing the data at present, and when not abusing her computer she can be heard muttering unspeakable things about ANOVAs and mimosa.

CSIRO Division of Entomology
Salvinia Project

Michael Storrs is currently undertaking a field trial in Kakadu National Park using herbicide to "mop up" salvinia that has been heavily damaged by the weevil control agent *Cyrtobagous salviniae*. The hope is that this integrated approach will improve the salvinia situation in the Park.

DPI&F Quarantine and Inspection Branch

Ted Fenner, along with **Phil Keane** (La Trobe University) and two Indonesian counterpart scientists, spent a month studying pests and diseases of cocoa in East Java, SE Sulawesi and Irian Jaya. This was part of a joint Indonesian-Australian government program of information gathering and exchange on organisms of plant quarantine interest. While the pest situation in Java is relatively well known, this is by no means the case in the other provinces and much material remains to be identified before a final report can be prepared.

It is hoped that an entomologist will very shortly take up the NAQS Plant Science Officer position, vacant since **Hermes Perona** left early in the year.

DPI&F Entomology Branch

It's mango season, and **Stuart Smith** and **Michael Neal** are busy working on hot-water treatment techniques, while **Deanna Chin** has been holding the fort answering extension enquiries, mainly on fruit flies and termites attacking mangoes. **Kaye Hergstrom** and **Haidee Brown** are testing the predation of melon thrips by various predators in the laboratory. Melon thrips are still being monitored by **Elliott Crowson** on properties wishing to export to South Australia, Tasmania and Western Australia.

John Duff, formerly of the Plant Pathology Branch, has joined Entomology for one year to research IPM of pests and diseases of ornamentals and bananas. John has already successfully demonstrated biological control of two-spotted mites by *Phytoseiulus persimilis* to the locals by introducing them at one nursery - what an evangelist!

Laurence Mound of The Natural History Museum, London, visited us twice in August, before and after his thrips collecting foray across northern Australia. His valuable suggestions on melon thrips research were much appreciated.

DPI&F Weeds Branch

This has been the calm before the storm, in work and in weather. **Debbie van Rangelrooy** is still filling a temporary vacancy in Tennant Creek, **Leslee Hills** has been circumnavigating Melville Island in an open boat, **Piers Barrow** has been in hospital in Adelaide getting his nostrils re-bored, **Grant Flanagan** has been coaching the NT women's volleyball team at the national indoor grand prix in Perth, and **Colin Wilson** has been holidaying in England. But from now on it will be all hands on deck. This wet season should see the arrival of three new biological control agents: a bud weevil and a fungus for mimosa, and a stem galling weevil for *Sida*. The wet should also mark the turning point for our previous couple of mimosa agents, both of which have established tenuous footholds at a couple of sites during the harsh dry season.

Suzanne Gall, who worked part-time in our group, has obtained a full-time position with the CSIRO Division of Entomology. We are all very proud of **Debbie van Rangelrooy** who won the

Department's Quarterly Award for outstanding achievement.

Wildman River Cashew Plantations

Shaun Hood commenced a PhD late last year through the Department of Entomology at Queensland University. He is investigating the effect of native enemies on the survival and abundance of the Mango Tip Borer, a major pest of cashew. To date he has developed the appropriate sampling techniques and is now in the process of recording the seasonal population dynamics of this pest in relation to tree phenology and rates of predation and parasitism. Being an industry-based project, Shaun is also involved in the insect pest monitoring program at Wildman River Cashew Plantation. In conjunction with the on-site staff and the plantation entomologist **Geoff Strickland**, Shaun is developing a new program which will hopefully yield detailed information on the population dynamics of the major insect pests. It is anticipated that the data generated will both reduce the number of insecticide applications required and reveal exactly when an application is needed.

Colin WILSON
Regional Councillor

NORTH QUEENSLAND

USDA Australian Biological Control Laboratory, Townsville

Joe Balciunas has returned from the United States where he attended the 33rd Annual Meeting of the Aquatic Plant Management Society, held in Charleston, South Carolina. Joe gave his presentation without slides, as the airline took six days to reunite him with his luggage that they had misplaced. Joe then met with scientists and funding agencies cooperating with us on the biological control of melaleuca project and inspected infestations of weeds in Florida. Some discussions were also held on the prospects for working on other native Australian plants which have become problem weeds in the USA.

Good progress continues to be made on the quarantine evaluation of the foliage-feeding weevil, *Oxyops vitiosa*, which was first shipped to the USA last year. Unfortunately, oviposition has been low at the quarantine facility (in Florida) and we have had to make monthly shipments of weevils to resupply them. In February of this year, we petitioned for our second potential biocontrol agent, the sawfly, *Lophyrotoma zonalis* to be exported to quarantine in the USA. This request has been approved by the Technical Advisory Group on Biological Control of Weeds and awaits final approval by APHIS. We hope to be able to ship this insect by the end of the year.

James Cook University, Zoology Department

The entomology group has been busy again, gearing up for a major tropical rainforest CRC project in collaboration with ANIC staff; they will be investigating patterns of invertebrate biodiversity in the wet tropics. **Richard Rowe** has started a project documenting social interactions in *Ropalidia* paper wasps. His video analyses of dominance hierarchies have already attracted the attention of **S. Yamane** and **Y. Ito**, who will be visiting the department from Japan shortly. **Chris Hill** continues his work on rainforest corridors, and attended the Ecological Society of Australia meeting in Canberra in September with **Maryke Gray**. Chris gave a paper on the role of corridors in the dispersal of selected insect taxa, and Maryke presented a poster on her recently completed Honours work on dung beetles as bioindicators. **Phil Weinstein** is still poking around tropical caves, keeping taxonomic colleagues busy with a surfeit of new species. He also received considerable media attention because of his new course in Public Health Entomology for next year: student numbers promise to be higher than expected, with graduate and medical practitioner enrolments boosting numbers.

QDPI-Mareeba

Mareeba entomologists have been kept busy over the past few months maintaining a thrips trapping network on the Tablelands and Wet Coast seeking *Thrips palmi*. None of this species was evident and sampling ceased when area freedom status was accorded those regions beyond the 500km radius around known infestation areas in SE Queensland.

Keith Halfpapp has recently had external funding confirmed for a new biocontrol project on palm leaf beetle (*Brontispa longissima*). The beetle has turned up at a few locations in Cairns and will pose a threat to the large palm industry if its spread is not contained.

Don Chandler, University of New Hampshire, Durham, USA, visited the Mareeba insect

collection recently to explore the pselaphids contained therein and discuss their taxonomy with **Ross Storey**.

Accompanying **Paul Zborowski** into Cape York over the past months have been **Steve Shattuck** and **David Rentz** (ANIC). A flow of good material is emerging from the CYPLUS work and it should keep the taxonomists occupied for quite some time.

Northern Australian Quarantine Survey

Judy Grimshaw and **Barbara Waterhouse** have a hectic schedule of surveys and meetings ahead. After Barbara spends a week in Darwin at the end of October, assisting in a program review, Judy will spend a week in the Torres Strait escorting an ABC television crew. This will be followed by a short survey of the most northerly islands in early December, by both team members, and a further short visit at the end of February. Late April will involve both team members in a more extended survey of the Central and Eastern islands of the Torres Strait. Hopefully, some time will be spent over Christmas and Easter catching up on much needed sleep and (if really lucky) a chance to take a few of those accrued recreational leave and time-in-lieu days. This latter outcome will depend on *not finding* any new quarantine incursions. Where are those extra dark sunglasses? You know, the ones you can hardly see through!

Harry FAY
Regional Councillor

S.E. QUEENSLAND

Queensland Museum

The Proceedings volume of the 12th International Congress of Arachnology, held at the Queensland Museum in July 1992, has just been published as a special issue of the Museum's *Memoirs*. This 310 page issue contains 47 papers by 50 authors dealing with arachnid palaeontology, scorpion biology and ecology, solfugid taxonomy, pseudo-scorpion biology, opilione morphology and various aspects of spiders, including biodiversity, taxonomy, ecology, ultrastructure, population biology, chromosomes, behaviour, phylogeny and evolution, biogeography, morphology, embryology, phenology, bio-indicators and biocontrol. At $30.00 this volume is a bargain. Send orders with payment to **Robert Raven** at the Queensland Museum, PO Box 3300, South Brisbane, Q. 4101. Include $8 for Australian postage, $15 for overseas sea mail and $20 for overseas air mail.

The Queensland Museum's "Travelling Insect Road Show" goes to Perth early next year when **Geoff Monteith** and **Heather Janetzki** run a series of their educational insect workshops at the CSIRO Science Education Centre at the Scitech Discovery Centre in West Perth (**see advertisement on next page**). The workshops are scheduled for just prior to the opening of the giant robotic insect display, "Gargantuans from the Garden", there on March 2. Sessions of the workshop will be offered from Sunday Feb 27 to Tuesday March 1. The workshops are principally aimed at teachers but are of value to anyone who wants to learn tricks and ideas for getting insect concepts across to children and the lay public. Besides they are great fun and are partly sponsored by the Australian Entomological Society. Ring 09-481 6295 to book or get an information leaflet.

Geoff MONTEITH
Queensland Museum

SOUTH AUSTRALIA

Department of Crop Protection
University of Adelaide

The lure of drinks and nibbles attracted a large number of SA members to an informal gathering of the AES, held in Urrbrae House on the Waite Campus in mid-September. During the evening the Vice President, **Peter Allen**, awarded a certificate to the 1993 Phil Carne Prize winner **Gary Taylor** and presented a summary of the Society's recent 24th Scientific Conference and AGM. A display of **Gwenda Mayo's** winning entries in this year's AES Biological Illustration Competition was a highlight of the night.

Visitors to the Department have included **Michael Day**, formerly of the British Museum of Natural History, who visited the taxonomy laboratory in October where he examined and sorted the Department's pompilid collection.

Seeking general additions to the insect collection, **Andy Austin**, **Paul Dangerfield**, **Azhar Saeed** and **Eveline Bartowsky** travelled to Mt. Chambers Gorge in the Flinders Ranges in October. **Chris Madden** attended the "Use of biota to assess water quality" conference, held at

INSECTS
IN THE CLASSROOM
COMES TO PERTH IN FEB 94!

****

This 3½ hour hands-on workshop on the use of insects in education and public activity programs was developed by the Queensland Museum and has been undertaken by 1300 people in Q, NSW & Vic.

Three days of sessions will be given at the **CSIRO Science Education Centre** from **Feb 27 to Mar 1**, prior to the opening of "Gargantuans from the Garden" at the Scitech Discovery Centre.

Presented by Geoff Monteith and Heather Janetzki

Cost: $35, includes resource kit and Certificate.

BOOKING OR INFORMATION ON: 09-4816295

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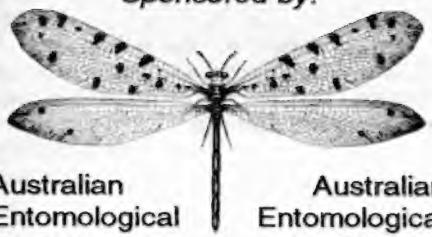

Australian Entomological Society

Australian Entomological Supplies

the University of Canberra in September. Travelling further afield, **Nicky Agelopoulos** returned home to Greece in September for a months R & R, and is now refreshed and ready to tackle her Ph.D write-up. In what some might regard as a statement of the postgraduate lab's priorities, Nicky presented us with a bottle of genuine Greek ouzo on her return. And who said "beware of Greeks bearing gifts"?

Jorg Kitt released the rose aphid parasitoid *Aphidius rosae* at the Waite Campus and 10 Victorian country locations in August and late September. Early indications of establishment are promising, with parasitoid numbers beginning to increase in the field.

Cate Hill was presented with the Department's T.O. Browning Medal for Distinction in Entomology by **Professor Browning** at a ceremony in October. Cate is presently a Ph.D student within the Department, studying the mode of action of Bt on sheep lice under the direction of **Dudley Pinnock** and **Otto Schmidt**.

Although busy with teaching commitments and the constant demands of his horde of postgrads, **Mike Keller** still finds time to assist members of the public with their entomological problems. One young man recently left Mike's office, his fears that he was infested with skin-burrowing insects allayed, but not before he had liberally doused himself with Mortein.

South Australian Museum

Recent visitors to Entomology were **Ian Common**, working on Oecophoridae, and **Michael Day**, who is in Australia with grant support to work on a generic review of the Pompilidae. He found an unexpectedly rich lode of material in the SAM collection.

Arachnology had two visitors from the ANIC, **Ting Kui Qin** who is interested in eupodoid mites, and **Jürgen Otto** who is working on erythracarine mites from arid areas.

Eric Matthews has completed generic reviews of the tenebrionid tribes Cyphaleini and Heleini, and is now starting on the Adeliini. **Gordon Gross** is hard at work on the catalogue of Australian and South Pacific Heteropteroidea, working mainly at home on his own computer.

Primary Industries

After the retirement of **Rip van Velson** in July, **Dennis Hopkins** has now taken on the role of

State Commissioner on the Australian Plague Locust Commission. Dennis visited Broken Hill in July to appear before an environmental review of the Commission's activities and attended the annual Commission meeting in Canberra in early August.

Another locust plague, the second in a row, is threatening the agricultural and horticultural areas of SA. Finance has been allocated and a control campaign commenced on October 5. **Ken Henry** and **Dennis Hopkins** will be heavily involved in this campaign through until Xmas.

Greg Baker has been assisting Australia's export drive by helping the wine industry with their problems of insects eating the corks in wine bottles. Greg is still waiting for the insects to emerge for identification, but has so far established that they have a preference for mature reds.

Entomologists from Primary Industries, the University of Adelaide and CSIRO met with **Douglas Lang**, Director General of CAB International, who was promoting the new look CAB and their latest CD ROM technology ... a far cry from the Empire Journal of Entomology.

Peter Bailey attended the highly successful Second Australian Workshop on *Bacillus thuringiensis* in Canberra during September. Peter sends his congratulations to the organisers.

Private Entomology Sector

James De Barro has been very busy at Crop Monitoring Services in the last two months, with intensive monitoring of annual crops such as grain legumes and brassicas. Aphids have been apparent in late sown brassicas, with cow pea aphid present in beans and lupins. In September the Second Lucerne Fair was held in Keith which, among many facets of dryland lucerne establishment, advertised for the pre-printing sale of the "Lucerne Handbook" which has been written by CMS and the SA DPI. It is a specific look at establishing dryland lucerne, and all the steps to ensure success. For further information on the handbook, James can be contacted on (087) 551 295.

Unattached Entomologists

Ron Simms reports that a cave-dwelling pseudoscorpion collected on a field trip earlier this year to the Naracoorte Caves system has been identified as *Protochelifer cavernarun* Beier. This is only the second Australian record of this species, the first report coming from the Nullarbor caves.

Bill FROST
Regional Councillor

TASMANIA

CRC for Temperate Hardwood Forestry

Myron Zalucki from the University of Queensland will be here from November-January as a visiting scientist. He will work on *Chrysophtharta bimaculata* (Chrysomelidae) larval feeding and adult migration.

Allastair Hunt has arrived from ANU in Canberra to take up a 3 year PhD scholarship working on *C. bimaculata* predators.

Department of Primary Industry & Energy

Lionel Hill advised Edgells on how to reduce the number of meatybites in frozen peas. Snails are the chief menace but slugs, budworms and armyworms also occur. In late October Lionel attended a HRDC workshop in Sydney to rationalise potato insect pest research. While there he visited **Gerry Cassis** at the Australian Museum and **Pavel Štys** from the Czech Republic to discuss bug taxonomy. Lionel has returned to a third year of field work on the effect and control of onion thrips in fennel.

Forestry Commission

Humphrey Elliott attended a *Bacillus thuringiensis* seminar in Canberra looking for ideas to improve control methods for eucalypt-defoliating chrysomelids and also trying to obtain external funding to pay for the research!

The Tasmanian Branch of the Australian Entomological Society held a joint meeting with the Microbiological Society with Dr **Barbara Helen Knowles**, a Royal Society University Research Fellow at Cambridge as guest speaker. The meeting was well attended with many comments that it was the first entomology meeting for about 15 years! More are planned.

Dick BASHFORD
Regional Councillor

VICTORIA

Department of Agriculture
Burnley Gardens/IHD Knoxfield

As your correspondent types this report, he gazes out at the desolate scene of the Department's near-extinct Burnley campus (aka Cretaceous Park). By the time this issue hits the streets, the following entomologists will have relocated to the Institute for Horticultural Development at Knoxfield:

Peter Cole
Nancy Endersby
DeAnn Glenn
Andrew Henderson
Paul Horne
Mali Malipatil
John Osmelak
Peter Ridland
Mark Smith
Cait Symington
David Williams

Contact with the above may be made through
Mail:
Institute for Horticultural Development
Private Bag 15
South Eastern Mail Centre
Victoria 3176.
Phone:(03) 210 9222
Fax:(03) 800 3521

Please note that the Victorian Agricultural Insect Collection will also be based at the Knoxfield campus.

Entomologists aligned with the Biotechnology Section, ie. **Gordon Berg**, **Jim Woodward** and **Garry McDonald**'s group (Garry, **Dave Bryant**, **Kylie Moritz**, **Tim Bessell-Brown** and **Eve Merton**), will remain at Burnley (where there is now plenty of room) until the end of December, when the Department's buildings are expected to close formally. Their new base is still uncertain, although The University of Melbourne looks good. At Burnley, these people can be contacted through
Mail:
Department of Agriculture, Burnley Gardens
Private Bag 15
South Eastern Mail Centre
Victoria 3176.
Phone:(03) 810 1511
Fax:(03) 819 5653.

For the present, **Peter Williams** can also be contacted at Burnley. However, he will be relocating to the State Chemistry Laboratory, where he can be reached by
Mail:
State Chemistry Laboratory
5 Macarthur St,
East Melbourne
Victoria 3002.
Phone:(03) 651 2285 or (03) 651 2283
Fax:(03) 654 4772.

The move from Burnley to Knoxfield has entailed a lot of feverish activity and is not over yet. Accommodation for the Victorian Agricultural Insect Collection, for insecticide testing facilities and for much of the field equipment, is not yet completed. In addition, most of the insect cultures to be moved have been split, to ensure that we don't lose the lot. The cultures moved to Knoxfield so far seem to be surviving well, despite a nasty kind of smell in their new CT rooms.

Speaking of splitting, **Anthony O'Toole** thought he'd show the rest of us how relocating was really done and bought himself a round-the-world ticket. He is expected to have relocated back to these parts in a year or so (and I've just realised that I didn't demand his AES subs. in advance!).

Garry McDonald has recently returned from a 3-week mission to China to evaluate a potential project (an integrated pest management program for rice and citrus pests in Zhejiang Province, eastern China) on behalf of AIDAB. It was a bad time to be away; most of the staff and fittings from the once-proud Insectary were moved to Knoxfield while he was gone. In Garry's absence, **Peter Williams** gave lectures on insect pests of crops and pastures to officers of the Department, and to farmers, at Dookie and Youanmite.

Two unforgivable omissions from last issue's Regional News were the departures from the Department of **Janet Horne** (in May) and **John MacFarlane** (in June). Janet and John both accepted Voluntary Departure Packages; Janet to concentrate on a promising career as a mother and John to go into retirement (although there have been rumours of John running entomology projects as a hobby). Both were important cogs in the Burnley machine for a considerable time (John started there in 1962!). I must apologise to Janet and John for this oversight - it certainly doesn't mean that you're not being missed!

Andrew HENDERSON and Alan YEN
Regional Councillors

OVERSEAS NEWS

Papua New Guinea

The Department of Agriculture and Livestock (DAL) has a new Chief Plant Protection Officer. He is Mr Gapi Kula, a PNG National from the Central Province. Gapi holds an M.Sc. degree in Plant Pathology and previously headed the pathology section of the Coffee Research Institute, Kainantu. Gapi can be reached on (675) 21 1618 (direct line) or 21 7899, Fax: (675) 21 4630. DAL has also appointed Mr Warea Orapa as the new Entomologist/Weed Officer in succession to Samson Laup. Warea is already extensively involved in the water hyacinth project jointly funded by the Australian International Development Assistance Bureau (AIDAB) and DAL for three years.

A new K35,000 Phytopathological Laboratory has recently been opened at the Lowlands Agricultural Research Station (LAES) at Keravat, East New Britain. The laboratory was funded jointly by the German Development Service (GDS) and DAL. Dr Berndt Pett, a German Scientist is in charge of the laboratory.

DAL now has two biological control/plant quarantine laboratory complexes, one at Laloki and the other at Keravat. The geographical location enables scientists to take advantage of different environmental conditions in two widely separated localities. Fred Dori heads the Laloki laboratory while John Moxon was in charge of the Keravat outfit. John, however, recently resigned from the services of DAL after a long spell as the cocoa entomologist and Team Leader, LAES, Keravat. John is now the Director of Cocoa and Coconut Research Institute, Keravat.

Ray KUMAR
PNG Correspondent

COMING EVENTS

THE A.J. NICHOLSON CENTENARY MEETING: ON THE FRONTIERS OF POPULATION ECOLOGY

18-22 April 1995, Canberra, Australia

This scientific symposium is a special event to celebrate the birth of A.J. Nicholson (1895-1969). It will include presentations on current research on the population ecology of organisms from a broad range of taxa, and from the perspective of theoreticians and applied ecologists.

Further details available from:
Mrs L. Lawrence
CSIRO Division of Entomology
GPO Box 1700
CANBERRA ACT 2601

9th International Auchenorrhyncha Congress Sydney 1997

An international meeting for scientists working with leafhoppers, planthoppers, cicadas and their relatives will be held in Sydney in 1997. The Congress now incorporates the International Workshops on Leafhoppers and Planthoppers of Economic Importance that were held in Europe over a number of years. This is the first of these meetings to be held in the Southern Hemisphere and is expected to feature the unique Australian fauna and its relationships with the faunas of SE Asia and the SW Pacific. The last Congress was held in Delphi, Greece, in August this year. Further details will be available early in 1994. Contact for the Congress is Dr M.J. Fletcher, NSW Agriculture BCRI, PMB 10, Rydalmere, NSW 2116, phone (02) 683 9752, fax (02) 630 4475.

6th International Working Conference on Stored Product Protection

17-23 April 1994
National Convention Centre, Canberra

SCIENTIFIC PROGRAM

The following topics will be addressed in contributed papers, keynote addresses, and discussion groups.

Storage engineering; Sampling and trapping; Fumigation and controlled atmospheres, including alternatives to methyl bromide; Grain protectant chemicals and inert dusts; Grain quality; Insect biology; Storage fungi, mycotoxins, and associated problems; Integrated commodity management; Quarantine and regulatory issues; Biological control; Physical control

SPECIALIST WORKSHOPS

Sampling and trapping; Standards; Expert systems; Appropriate storage; Inert dusts; Extension and small scale and farm storage

INDUSTRY EXHIBITION

There will be a comprehensive exhibition of the latest in commodity handling and storage equipment, facilities and pest control systems

Enquiries regarding conference organisation, administration and registration should be directed to **Ms Gail Hawke**,
Capital Conferences Pty Ltd, PO Box N399,
Grosvener Place, Sydney, NSW 2000,
Telephone (02) 252 3388, Facsimile (02) 241 5282

Enquiries regarding the program and trade exposition should be directed to **Dr Bruce Champ**,
Chairman 6th IWCSPP Organising Committee, c/- ACIAR,
GPO Box 1571, Canberra ACT 2601,
Telephone (06) 248 8588, Facsimile (06) 257 3051.

NEW PUBLICATIONS

"Sawfly Life History Adaptations to Woody Plants" edited by Michael Wagner and Kenneth F. Raffa. 1993. Academic Press, Inc., San Diego, New York, Boston, London, Sydney, Tokyo, Toronto. Hard Cover. 581pp.

This new compilation is the first to comprehensively cover the biology, systematics, and economic significance of the sawflies (Hymenoptera, Symphyta). It is divided into sections dealing with I. Systematics, Life History and Diversity, II. Adaptations to Host Plants, III Adaptations to Natural Enemies, IV. Implications of Sawfly Adaptations to Population Dynamics and V. Life History Traits and Population Patterns. The Australian input is a chapter entitled "Life History Strategies of Australian Pergid Sawflies and their Interactions with Host Plants" written by John Macdonald and Cliff Ohmart. Basically, the book contains everything you ever would need to know about sawflies.

"Locusts and Grasshoppers of the Australian Region" by Graeme L. Baker. Number D9E of The Field Guides to the Most Serious Locust and Grasshopper Pests of the World, published by The Orthopterists' Society and edited by Vic Vickery. $A14.00

This field guide provides information on the identities, economic impact and control of the more serious grasshopper pests found in Australia. Species covered are the Australian plague locust, small plague locust, tropical migratory locust, yellow-winged locust, wingless grasshopper, spur-throated locust and giant grasshopper. Notes on a few other species of minor sporadic pest status are included.

Copies are available from:
Publications
NSW Agriculture
LMB 21
ORANGE NSW 2800

"Principles and Techniques of Contemporary Taxonomy" by D.L.J. Quicke. Blackie Academic and Professional, London, Glasgow, New York, Tokyo, Melbourne, Madras. 1993. 311pp.

Published as part of Blackie's "Tertiary Level Biology", this compact book is aimed at advanced undergraduate level and, as such, provides a comprehensive examination of taxonomic techniques. The titles of the 13 chapters give some idea of the comprehensive cover provided: 1. Introduction, 2. Characters, Taxa and Species, 3. Phylogenetic Reconstruction - Cladistics and Related Methods, 4. Phenetic Methods in Taxonomy, 5. Keys and Identification, 6. Nomenclature and Classification, 7. Cytotaxonomy, 8. Chemotaxonomy and Related Topics, 9. Immunotaxonomy, 10. Proteins and Taxonomy, 11. Nucleic Acid Methods, 12. Palaeotaxonomy, Biogeography, Evolution and Extinction, 13. Museums, Herbaria, Biodiversity, Conservation and the Future of Taxonomy. There is also a Glossary and Bibliography.

Purchase cost was £49.95 at The Natural History Museum Bookshop in London which will translate to more than $A100.

Proceedings of the 12th International Congress of Arachnology.

The Proceedings volume of the 12th International Congress of Arachnology, held at the Queensland Museum in July 1992, has just been published as a special issue of the Museum's *Memoirs*. Details are given on pages 23-24 under the Queensland Museum Regional News.

NEW FROM NSW UNIVERSITY PRESS

The following four publications are available from:

NSW University Press
PO Box 1
Kensington NSW 2033
Phone (02) 398 8900
Fax (02) 398 3608

The following notes are taken from the advertising brochures distributed by UNSW Press and are not to be taken as independent book reviews.

"Insects as Predators" by Tim New. UNSW Press. $19.95.

This book, the first authoritative Australian work on insect predators, draws together recent research on the subject to provide a comprehensive overview.

Chapters include perception and selection of prey, cannibalism, safe and effective control of insect pests, and the defence techniques used by prey.

"Introductory Entomology for Australian Students" by Tim New, UNSW Press. 196pp. $29.95 (+ $3 p/h per copy)

This concise text is the first of its kind - an introduction to the study of insects designed especially for Australian undergraduate students.

This broad-ranging work covers all aspects of insect life in a straightforward manner, including biology, morphology, anatomy and physiology.

There is an extensive section on behaviour and another which traces the evolution of insects, from the earliest fossils to recent adaptations.

The book contains a synopsis of insect orders in Australia and an examination of our native insect fauna - both aquatic and terrestrial - as a functioning whole.

The relationship between insects and humans is also examined, from conservation issues to methods of pest control.

"Flying Colours, Common Butterflies, Moths and Caterpillars of South-Eastern Australia" by Pat and Mike Coupar. UNSW Press. 128pp. $17.95 (+$3 p/h per copy)

This delightful book looks at the Lepidoptera of S.E. Australia in detail. Beautifully illustrated with colour and black and white photographs and detailed drawings, it is an essential companion for collectors and amateur naturalists.

In Part One, the authors explain the life cycle of butterflies and moths and provide a detailed key to help the reader easily identify different caterpillars in the field. The structure and methods of camouflage and defence of caterpillars and adults are shown, along with extensive information on predators, parasites and diseases.

In Part Two, common species are listed with a wealth of identification details, diagrams and colour photographs. It also gives tips on how to attract butterflies and moths to your garden, using foodplants and good garden design.

"Hidden Rainforests. Subtropical Rainforests and their Invertebrate Biodiversity" by Geoff Williams. UNSW Press in association with The Australian Museum. 220pp. $59.95 (+ $5 p/h per copy)

This is an absorbing case study of Australian subtropical rainforests in the Manning Catchment of Northern NSW. This is an area of great biogeographic interest, situated on the southern boundary of the McPherson "interzone", a region of pronounced biotic diversity, rich in endemic plants and animals.

"Hidden Rainforests" is an extraordinary exploration of rainforest ecology - one which has relevance for all subtropical rainforest communities in Australia.

Geoff Williams spent more than a decade observing and studying the last of the surviving rainforest of this region. His painstaking study has resulted in new perspectives in rainforest classification and function, as well as the first detailed survey of subtropical invertebrate communities. Despite their relative abundance and richness, invertebrates are often neglected in studies of rainforest fauna, and this book goes a long way toward redressing that problem.

"Hidden Rainforests" includes nearly 200 colour photographs and specialists will find the detailed appendices valuable. But this book is not just for the specialist, it is also written for all those people who are interested in our rainforests and who want to preserve their richness for all future generations.

Call for Nominations for the 1994 Ian Mackerras Medal for Excellence in Entomology

The Executive invites nominations of Society members for the sixth award of the Ian Mackerras Medal, in 1994.

Those wishing to nominate a member for the award of the Medal should bear in mind that:

(a) Only financial members of the Society who will be under the age of 50 years in September 1994 are eligible for nomination.

(b) A candidate must be nominated by not fewer than two financial members of the Society.

(c) Proposers of a candidate shall, not less than six months prior to the Annual General Meeting in September 1994, provide the Secretary with a detailed statement including the candidate's name, date of birth, academic distinctions, relevant appointments and membership of societies, a list of the candidate's more important publications, and a statement of not more than 500 words explaining why the candidate merits this distinction in entomology.

(d) A Selection Committee for award of the Medal will consist of the President (Convenor) and four senior members of the Society. Nominees or signatories to a nomination are barred from serving on the Selection Committee.

(e) Should the Committee recommend to the Executive that an award be made, the name of the recipient will be announced and, if possible, the Medal presented during the week of the 25th Annual General Meeting in September 1994.

Previous recipients of the Mackerras Medal are:
Dr J.A.L. Watson (1984), Dr R.W. Sutherst (1986), Dr T.R. New (1988), Dr R.A.I. Drew (1990) and Dr E.S. Nielson (1992).

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